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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,442

01/27/2004

Joseph Bobier

P031696-08UT

1543

26376

7590

10/31/2006

DENNIS L. COOK, ESQ.  
THE LAW OFFICES OF DENNIS L COOK PLLC  
12718 DUPONT CIRCLE  
TAMPA, FL 33626

EXAMINER

BOCURE, TESFALDET

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/765,442	BOBIER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tesfaldet Bocure	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All, b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/8/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Claims 1-17 are pending in the Application.
2. Examiner called Applicant's representative Mr. Dennis L. Cook on October 26, 2006 to see if there is any way to expedite the prosecution of the application and said he going to call back, however no response is received so far. .

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,3 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii (US patent number 5,789,991).

Ishii teaches a transmission system having a transmitter (fig.3) and receiver (figs 6-9 and 11-13), wherein the transmitter comprising: a carrier frequency generator (see OSC in fig. 3 as in claim 5) for generating carrier wavelets each defined by 360 degrees and each cycle having zero crossing with zero energy at each zero crossing (see each of the sine waves modulated by the binary signals in fig. 5); and modulating the carrier frequency according to the information signal to be transmitted, and each of the carrier modulated with the 0's and 1' having a corresponding high and low frequency carrier, claimed altered and not altered respectively (see for example col. 1, lines 10-37) as in

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claims 1,3,5,9 and 12; and transmitting (claimed broadcasting in claim 3) the frequency shift keying modulated signal as in claims 1,3 and 5.

The claimed integer cycle in claim 3 includes whole number of cycles and reads on the modulated carriers in figure 5.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2,4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii (US patent number 5,789,991) in view of Soh (Patent Application Publication US 2002/0196865).

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Ishii teaches the claimed subject matter in claim 1 as indicated above.

Further, Ishii also teaches that the FSK modulated carriers are modulated for further band limiting the carriers (see BPF in fig.3).

What Ishii fails to teach is that the filtering device, BPF, for reducing any of the harmonics associated with the carrier frequency (claimed wavelets altered).

Soh for the same endeavor the instant application and that of Ishii teaches a transmitter for transmitting a frequency shift modulated signal using a single cycle for every bit (figures 2 and 3) having a waveform shaping circuit for shaping the harmonic of the lower frequency square waveforms as in claims 2,4 and 6.

Therefore, it would have been obvious to one of an ordinary skill in the art to shape the lower harmonic of the carrier frequency so that the distortion associated with lower harmonic can be eliminated at the time the invention was made.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7-11 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishi Ishii (US patent number 5,789,991) in view of Reichman et al. (US Patent number 6,240,073) and Soh (Patent Application Publication US 2002/0196865).

Ishii teaches a transmission system having a transmitter (fig.3) and receiver (figs 6-9 and 11-13) wherein the transmitter comprising: a carrier frequency generator (see OSC in fig. 3 as in claim 5) for generating carrier wavelets each defined by 360 degrees and each cycle having zero crossing with zero energy at each zero crossing (see each of the sine waves modulated by the binary signals in fig. 5); and modulating the carrier frequency according to the information signal to be transmitted, and each of the carrier modulated with the 0's and 1's having a corresponding high and low frequency carrier, claimed altered and not altered respectively (see for example col. 1, lines 10-37) as in claims 1,3,5,9 and 12; and transmitting (claimed broadcasting) the frequency shift keying modulated signal as in claims,9 and 12.

The claimed integer cycle in claims 9 and 12 includes whole number of cycles and reads on the modulated carriers in figure 5.

Further to claims 9 and 12, Ishii also teaches that the receiver (see figures 11 and 12) for receiving the transmitted RF signal and reconstructing the original information.

Further to claim

However he fails to teach that:

the received FSK signal is down converted to IF signal as in claims 9 and 12;  
and

that the broadcasted signal being TDMA and FDMA as in claims 7,8,10,11,16  
and 17.

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Reichman for the same endeavor as the instant application and that of Ishii, teaches a transmission system capable of transmitting and receiving TDMA and FDMA signal using an FSK modulation (see col. Lines –68), where in the receiver receiving the transmitted RF signal and down convert the signal to Intermediate Frequency (see front end down converter 224 in fig. 10).

Therefore, it would have been obvious to one of an ordinary skill in the art to use the down converter of Reichman in the receiver of Ishii to down convert the RF transmitted signal of Ishii to IF and broadcast the FSK modulated signals using TDMA or FDMA at the time the invention was made.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishi Ishii (US patent number 5,789,991) in view of Reichman et al. (US Patent number 6,240,073) and .

Ishii and Reichman teach the claimed subject matter in claim 12 as indicated above with respect to art rejection of claim 12.

Further, Ishii also teaches that the FSK modulated carriers are modulated for further band limiting the carriers (see BPF in fig.3).

What Ishii and Reichman fail to teach is that the filtering device, BPF, for reducing any of the harmonics associated with the carrier frequency (claimed wavelets altered).

Soh for the same endeavor the instant application and that of Ishii teaches a transmitter for transmitting a frequency shift modulated signal using a single cycle for every bit (figures 2 and 3) having a waveform shaping circuit for shaping the harmonic of the lower frequency square waveforms as in claims 13 and 14.

Therefore, it would have been obvious to one of an ordinary skill in the art to shape the lower harmonic of the carrier frequency so that the distortion associated with lower harmonic can be eliminated at the time the invention was made.

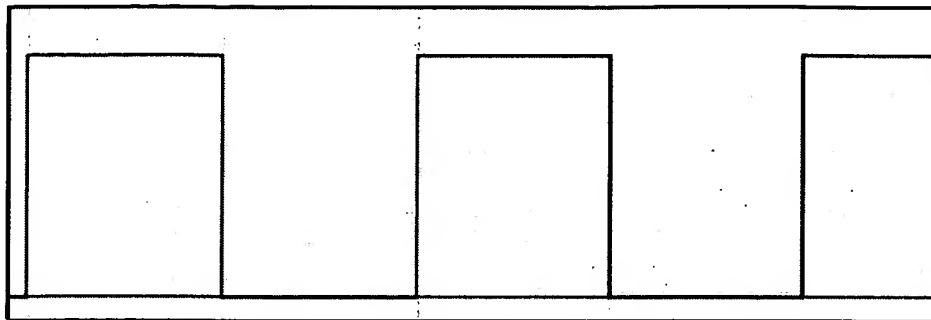
### ***Response to Amendment***

12. In response to Applicant's Argument that:

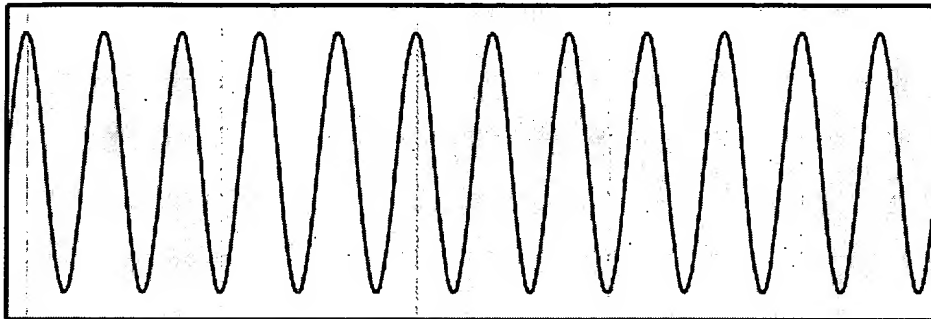
"--- resulting in a spectral output of multiple frequencies spread over a broad spectral band during said altered 360 degree cycle," contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention---

After further reviewing the case, the newly added limitation, "—resulting spectral output of multiple frequencies spread over broad spectral during the altered 360 degree cycle," still reads on a Frequency Shift Keying, where the number of frequency on one of the states, either zero or one is higher than the other one. See for the number of frequencies corresponding to the data state one modulating the carrier and that of the data state zero.

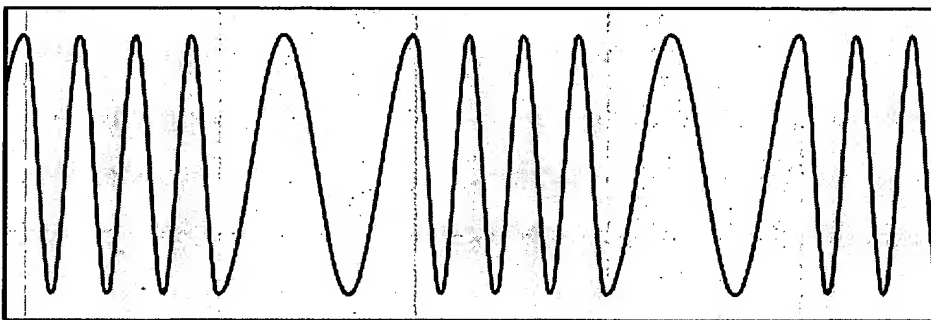




Data



Carrier



Modulated Signal

**Conclusion**

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tesfaldet Bocure whose telephone number is (571) 272-3015. The examiner can normally be reached on Mon-Thur (7:30a-5:00p) & Mon.-Fri (7:30a-5:00p).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayanti (Jay) Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

T.Bocure

Tesfaldet Bocure  
Primary Examiner  
Art Unit 2611

